

202

200

204

Index			Data Table					Lock Table		
C1	C2	RID	RID	C1	C2	C3	C4	Locks	RID	Lock Attributes Transaction
A	1	000201	000201	A	1	46	ABC			
A	2	000202	000202	A	2	54	LMN			
B	3	000203	000203	B	3	23	QWP			
			000204							

FIG 2(A) (Prior Art)

202

212

200

204

Index			Data Table					Lock Table		
C1	C2	RID	RID	C1	C2	C3	C4	Locks	RID	Lock Attributes Transaction
A	1	000201 D	000201	A	1	46	ABC	X	000201	Delete C1=A
A	2	000202 D	000202	A	2	54	LMN	X	000202	Delete C1=A
B	3	000203	000203	B	3	23	QWP		000204	
			000204							

FIG 2(B) (Prior Art)

202

212

200

204

Index			Data Table					Lock Table		
C1	C2	RID	RID	C1	C2	C3	C4	Locks	RID	Lock Attributes Transaction
A	1	000201 D	000201	A	1	46	ABC	X	000201	Delete C1=A
A	2	000202 D	000202	A	2	54	LMN	X	000202	Delete C1=A
B	3	000203	000203	B	3	23	QWP		000204	Insert Trans.
			000204 A	1	86	NEW		X		

FIG 2(C) (Prior Art)

202

212

200

204

Index			Data Table					Lock Table		
C1	C2	RID	RID	C1	C2	C3	C4	Locks	RID	Lock Attributes Transaction
A	1	000201 D	000201	A	1	46	ABC	X	000201	Delete C1=A
A	2	000202 D	000202	A	2	54	LMN	X	000202	Delete C1=A
B	3	000203	000203	B	3	23	QWP		000204	Insert Trans.
			000204 A	1	86	NEW		X	000201	S-lock in queue

FIG 2(D) (Prior Art)

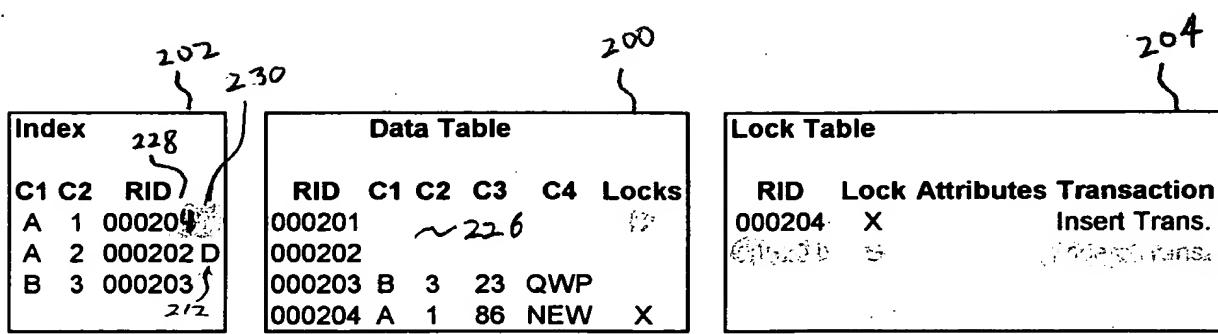


FIG 2(E) (Prior Art)

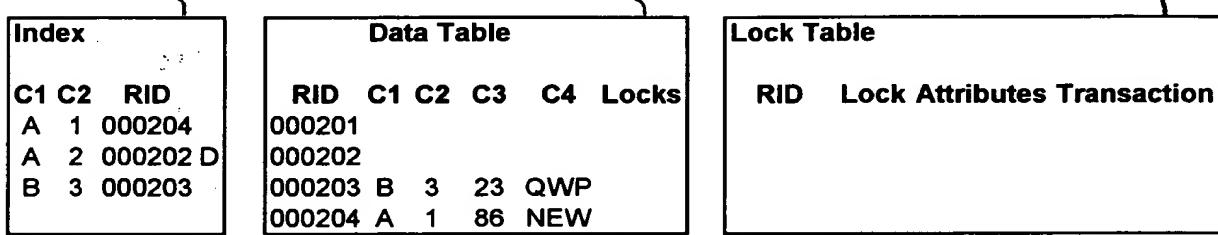


FIG 2(F) (Prior Art)

1082610 - 060416360

Index		
C1	C2	RID
A	1	000201
A	2	000202
B	3	000203
B	4	000204

Data Table					
RID	C1	C2	C3	C4	Locks
000201	A	1	46	ABC	
000202	A	2	54	LMN	
000203	B	3	23	QWP	
000204	B	4	97	VED	

Lock Table	RID	Lock Attributes	Transaction

FIG 3(A) (Prior Art)

Index				
C1	C2	RID		
A	1	000201	D	
A	2	000202	D	
B	3	000203	D	
B	4	000204	D	

Data Table						
RID	C1	C2	C3	C4	Locks	
000201	A	1	46	ABC	X	
000202	A	2	54	LMN	X	
000203	B	3	23	QWP	X	
000204	B	4	97	VED	X	

Lock Table			
RID	Lock	Attributes	Transaction
000201	X		T1
000202	X		T1
000203	X		T2
000204	X		T2

FIG 3(B) (Prior Art)

Index			
C1	C2	RID	
A	1	000201	D
A	2	000202	D
B	3	000203	D
B	4	000204	D

Data Table					
RID	C1	C2	C3	C4	Locks
000201					
000202					
000203					
000204					

Lock Table	RID	Lock Attributes	Transaction

FIG 3(C) (Prior Art)

Index			
C1	C2	RID	
A	1	000201	D
A	2	000202	D
B	3	000203	D
B	4	000204	D

Data Table					
RID	C1	C2	C3	C4	Locks
000201	B	3	57	BKM	X
000202				322	
000203	A	1	77	SFR	X
000204					

RID	Lock	Attributes	Transaction
000203	X		T3
000201	X		T4

FIG 3(D) ³¹⁸ (Prior Art)

302
312
300
304

Index			Data Table					Lock Table			
C1	C2	RID	RID	C1	C2	C3	C4	Locks	RID	Lock Attributes	Transaction
A	1	000201 D	000201	B	3	57	BKM	X	000203	X	T3
A	2	000202 D	000202						000201	X	T4
B	3	000203 D	000203	A	1	77	SFR	X	000201	S-lock in queue	T3
B	4	000204 D	000204								

FIG 3(E) (Prior Art)

302
312
300
304

Index			Data Table					Lock Table			
C1	C2	RID	RID	C1	C2	C3	C4	Locks	RID	Lock Attributes	Transaction
A	1	000201 D	000201	B	3	57	BKM	X	000203	X	T3
A	2	000202 D	000202						000201	X	T4
B	3	000203 D	000203	A	1	77	SFR	X	000201	S-lock in queue	T3
B	4	000204 D	000204						000203	S-lock in queue	T4

FIG 3(F) (Prior Art)

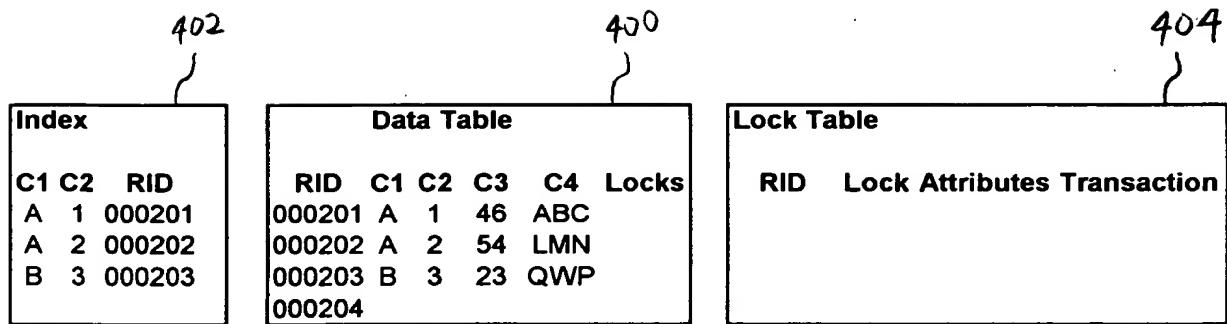


FIG 4(A)

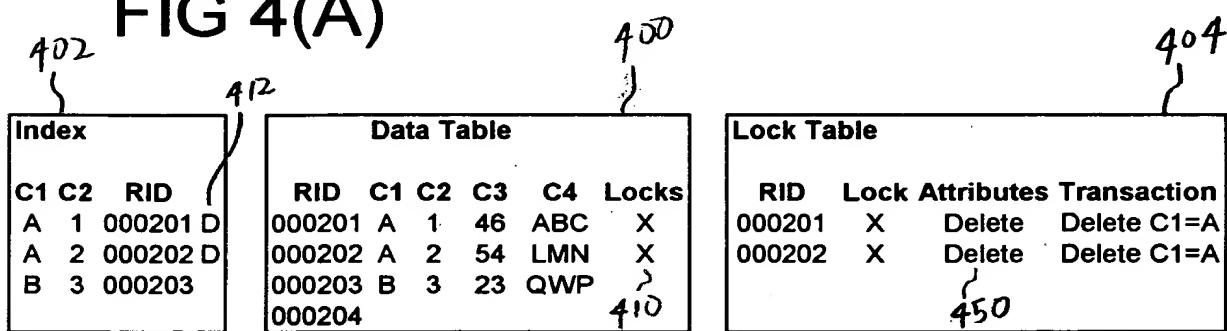


FIG 4(B)

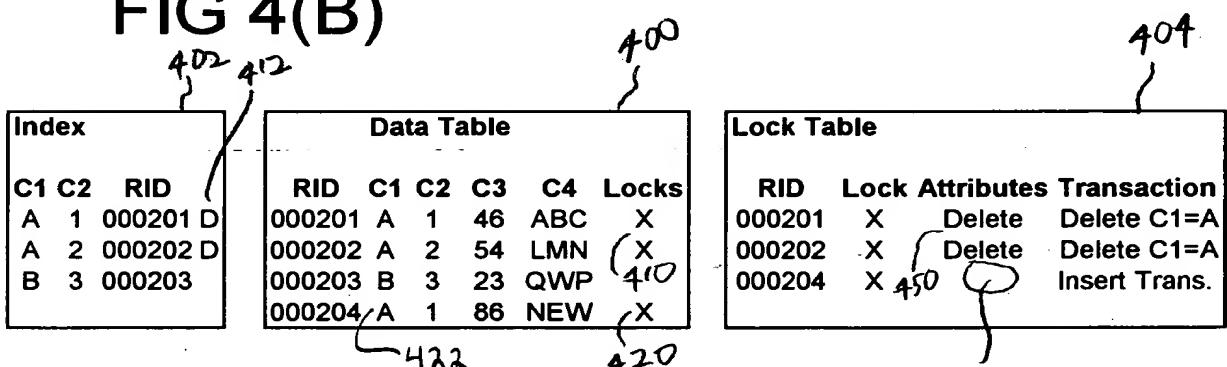


FIG 4(C)

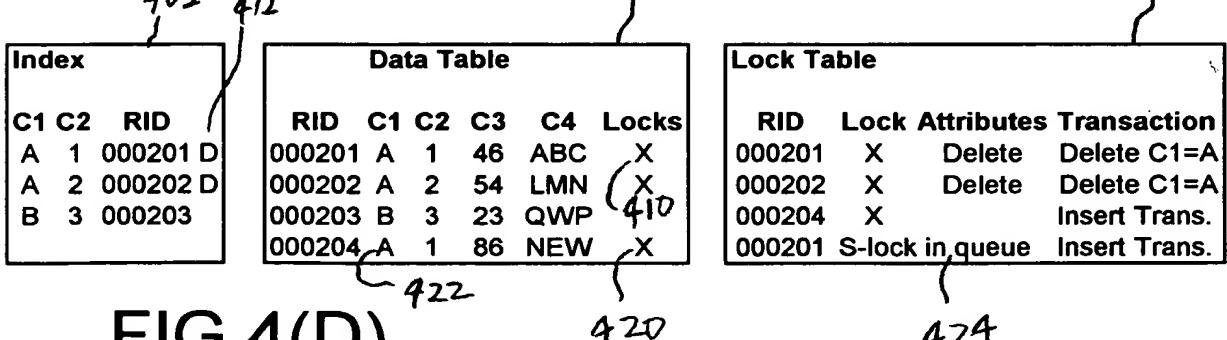


FIG 4(D)

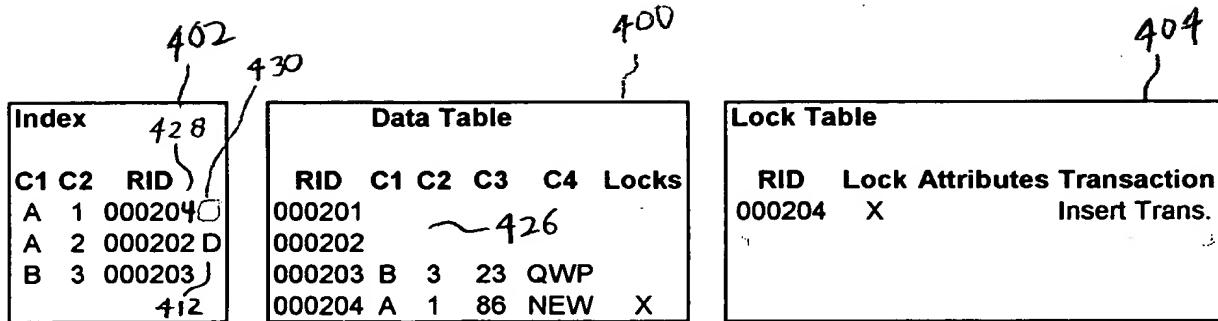


FIG 4(E)

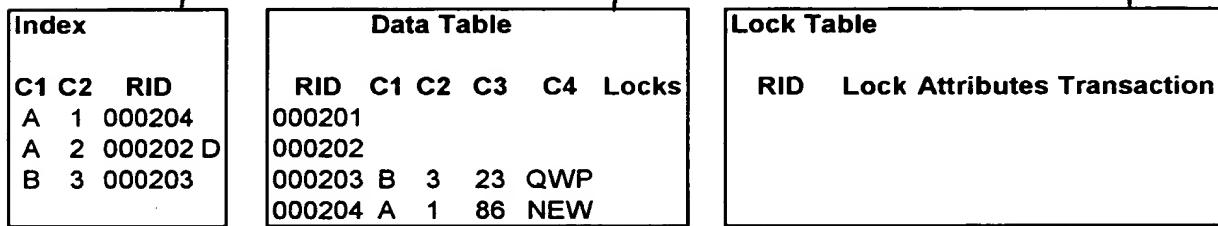


FIG 4(F)

502 500 504

Index		Data Table					Lock Table				
C1	C2	RID	RID	C1	C2	C3	C4	Locks	RID	Lock Attributes	Transaction
A	1	000201	000201	A	1	46	ABC				
A	2	000202	000202	A	2	54	LMN				
B	3	000203	000203	B	3	23	QWP				
B	4	000204	000204	B	4	97	VED				

FIG 5(A)

502 512 500 504

Index		Data Table					Lock Table				
C1	C2	RID	RID	C1	C2	C3	C4	Locks	RID	Lock Attributes	Transaction
A	1	000201 D	000201	A	1	46	ABC	X	000201	X	Delete T1
A	2	000202 D	000202	A	2	54	LMN	X	000202	X	Delete T1
B	3	000203 D	000203	B	3	23	QWP	X	000203	X	Delete T2
B	4	000204 D	000204	B	4	97	VED	X	000204	X	Delete T2

FIG 5(B)

502 512 500 510 550 504

Index		Data Table					Lock Table				
C1	C2	RID	RID	C1	C2	C3	C4	Locks	RID	Lock Attributes	Transaction
A	1	000201 D	000201								
A	2	000202 D	000202								
B	3	000203 D	000203								
B	4	000204 D	000204								

514

FIG 5(C)

502 500 504

Index		Data Table					Lock Table				
C1	C2	RID	RID	C1	C2	C3	C4	Locks	RID	Lock Attributes	Transaction
A	1	000201 D	000201	B	3	57	BKM	X	000203	X	T3
A	2	000202 D	000202						000201	X	T4
B	3	000203 D	000203	A	1	77	SFR	X			
B	4	000204 D	000204								

FIG 5(D)

518 516

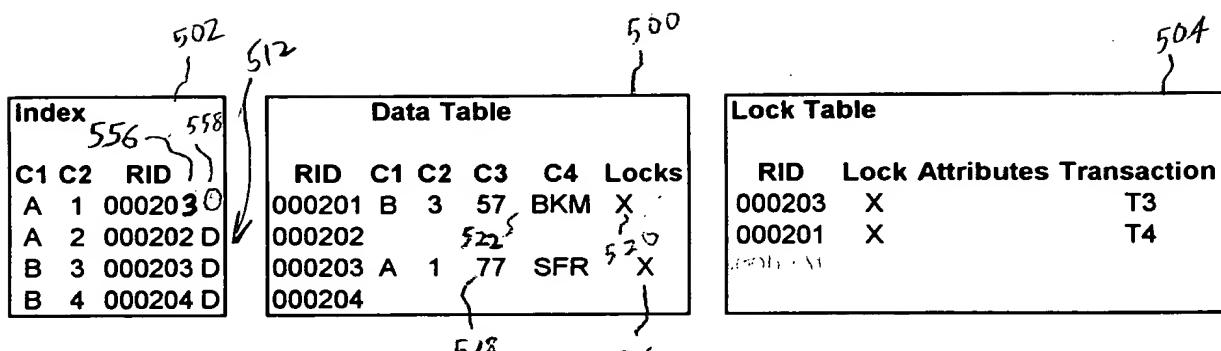


FIG 5(E)

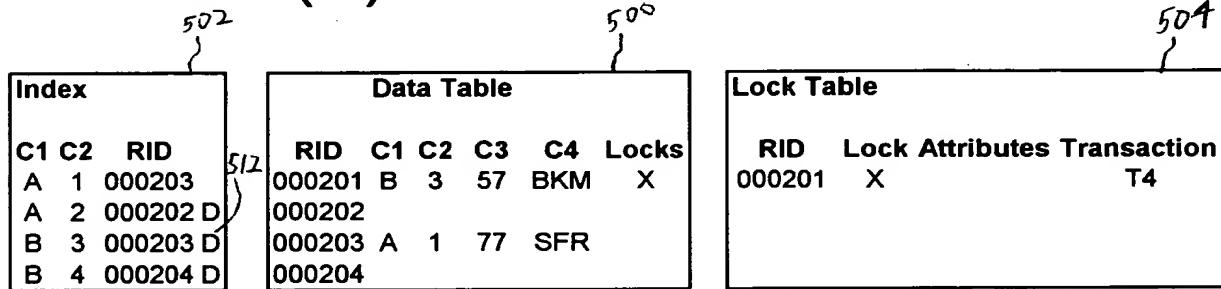


FIG 5(F)

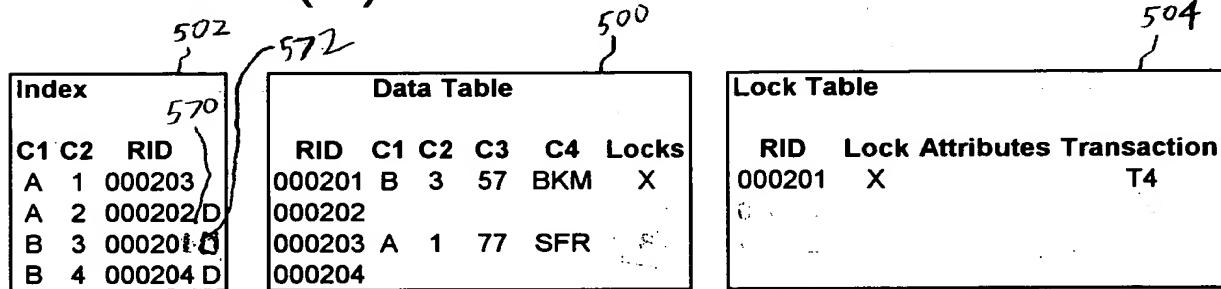


FIG 5(G)

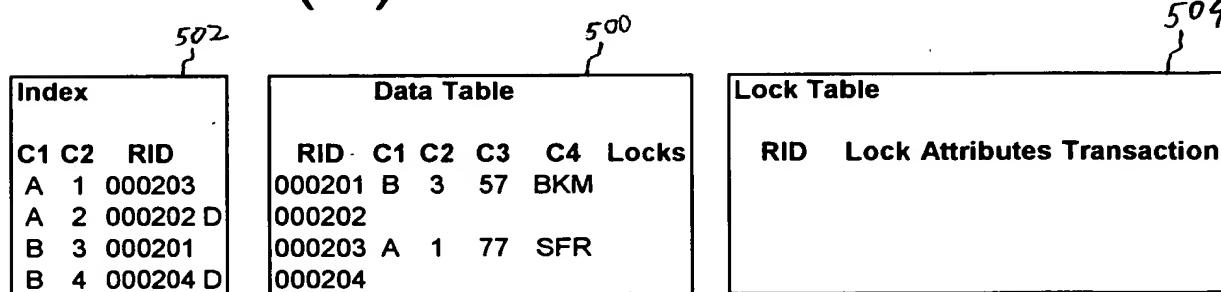


FIG 5(H)

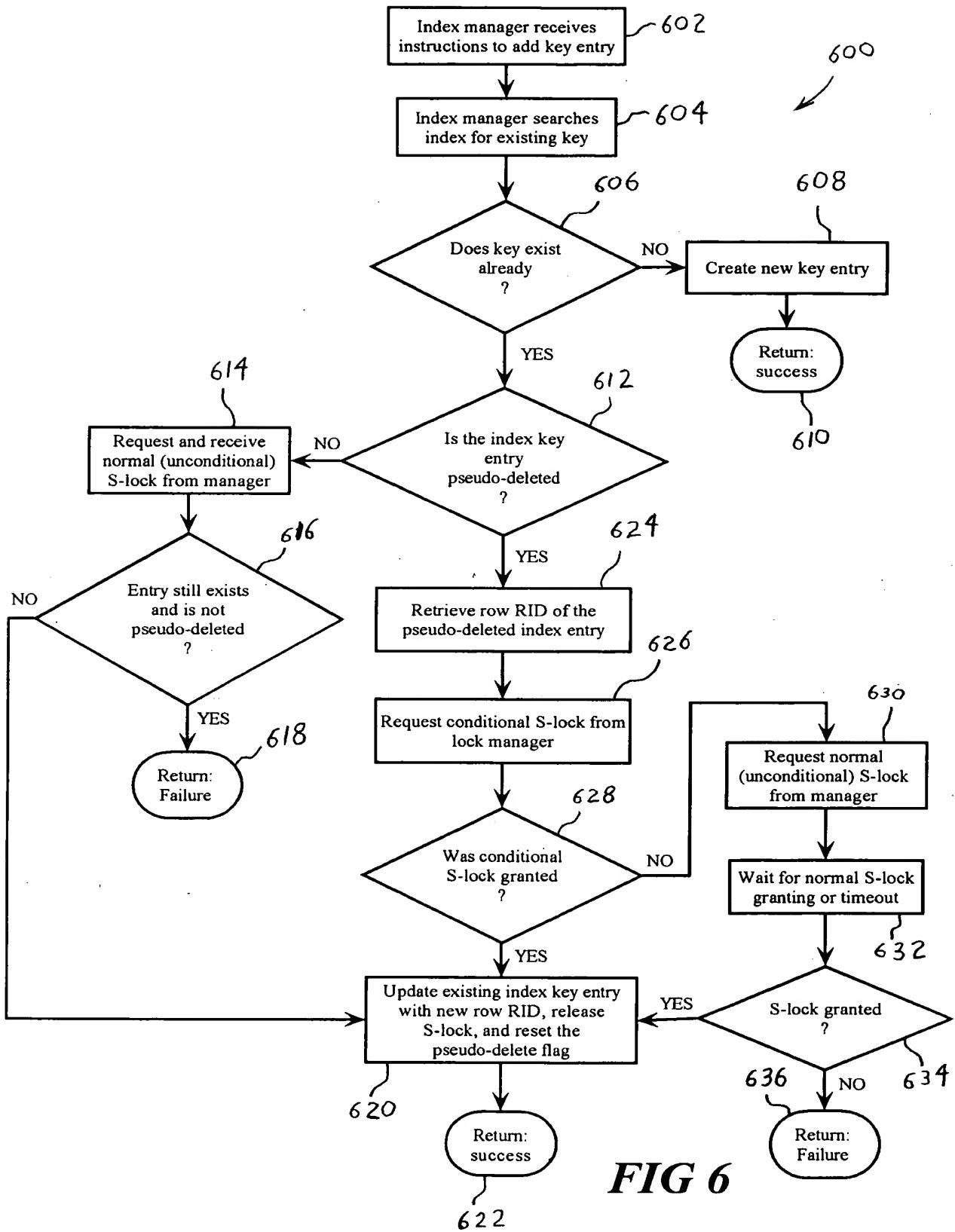


FIG 6